



#157 Appeal Brief
PATENT P56132
5/15/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Application of:

Appeal No.

DEUK-SUNG LIM

Serial No.: 09/603,595

Examiner: LEE, S.

Filed: 26 June 2000

Art Unit: 2852

For: ELECTRO PHOTO MULTI FUNCTIONAL PERIPHERAL APPARATUS

Attn: Board of Patent Appeals & Interferences

APPEAL BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to appellant's notice of appeal filed on 7 March 2002, appellant hereby appeals to the Board of Patent Appeals and Interferences from the final rejection of claims 2 through 3, 6 through 10, 13 through 15, and 17 through 19 as set forth in the final office action mailed on 7 November 2001 (Paper No. 10) and in the advisory action mailed on 19 February 2002. In the advisory action, claims 4, 5, 11, 12, and 16 were allowed for the purpose of appeal.

Folio: P56132

Date: 5/7/02

I.D.: REB/RHS/kf

I. REAL PARTY IN INTEREST

Pursuant to 37 CFR §1.192(c)(1)(as amended), the real party in interest is:

SamSung Electronics Co., Ltd.
#416, Maetan-dong, Paldal-gu
Suwon-city, Kyungki-do, Republic of KOREA

as evidenced by the Assignment executed by the inventor on 12 August 2000 and recorded in the U.S. Patent & Trademark Office on 1 September 2000 at Reel 011081, frame 0466.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals and interferences known to Appellant, Appellant's legal representatives, or assignee, which will directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1 through 19 are pending in this application. Claims 1 through 3, 6 through 10, 13 through 15, and 17 through 19 were rejected while claims 4, 5, 11, 12, and 16 were objected in the final office action (Paper No. 10). Claims 4, 5, 11, 12, and 16 were thereafter indicated as allowable in the advisory action (Paper No. 12) for purposes of Appeal.

IV. STATUS OF AMENDMENTS

An Amendment After Final was filed on 6 February 2002 in response to the final

office action (Paper No. 10) mailed on 7 November 2001. The Amendment was entered for the purpose of appeal as set forth in the advisory action (Paper No. 12).

V. SUMMARY OF INVENTION

The invention of the appellant (hereinafter "Lim") addresses a problem in removing paper jams in a copier or other electro-photo multi-functional peripheral apparatus, particularly, such an apparatus having various different paper transport paths.

As shown in Fig. 2, when a paper jam occurs in a conventional apparatus, it is very complicated to remove the jammed paper sheet. First, a top cover 4 is opened and a developer 5 is taken out of the main body. Then, the jammed paper sheet is removed. After that, the developer is received again in the main body and the top cover is closed. Further, in case the jammed paper sheet is mechanically caught by a roller, it is very difficult to remove the jammed paper sheet, since the jammed paper sheet is crumpled or torn. (See Lim's specification, p. 3, lines 1-6.¹)

Lim's invention addresses the problem by providing an electro-photo multi-functional peripheral apparatus comprising a main body 10 which is provided with an optional auxiliary device 12 (Specification 9:5) such as a sorter, a power stacker or a large scale paper feeding unit located at one side thereof (*id.*; see also Specification 3:14-17). A feeding unit 13 for feeding sheets of recording paper is mounted at the other side of the

¹ Lim's specification as filed is cited hereinafter as "Specification [page number]:[line number]".

main body (Specification 9:6). A feeding cassette 14 or 15 is mounted at a lower side portion of main body 10 (Specification 9:9-13). A multipurpose feeding unit assembly 20 is removably mounted at a center portion of the main body and horizontally transports the recording paper fed from the feeding unit (Specification 9:7). The main body is formed with a first, a second, and a third paper transport paths for discharging the recording paper fed from the optional device (Specification 4:4-6).

Another aspect of Lim's invention provides an electro-photo multi-functional peripheral apparatus comprising a main body 10 having an optional device such as a sorter, a power stacker, a large scale paper feeding unit and a multipurpose feeding unit 20 at one side thereof (Specification 4:7-10). A feeding unit for feeding a recording paper is mounted at the other side of main body 10. A multipurpose feeding unit assembly 20 is removably mounted at a center portion of main body 10 and horizontally transports the recording paper fed from the feeding unit. Multipurpose feeding unit assembly 20 comprises a jammed paper removing means for easily removing a jammed paper.

Preferably, the apparatus of Lim's invention is configured as follows:

- Multipurpose feeding unit assembly 20 has a rectangular base member 21. One or more cover plates 23 are mounted on an upper face of base member 21, and a paper feeding means for feeding the recording paper is mounted at

base member 21 and the cover plate (Specification 10:7-8). A power transmitting means transmits power to the paper feeding means (Spec 10:8-9, 11:17-12:4). A guiding means^{26, 27} guides a backward and forward movement of multipurpose feeding unit assembly 20 (Specification 10:4-5, 14-16).

- The paper feeding means has feeding rollers 41 and 42 which are mounted at an interval on a rear side of base member 21 and are rotated by the power transmitting means (Specification 11:6-7). Pinch rollers 51 and 52 are rotatably mounted at cover plates 23 and 23', so as to be respectively opposite to feeding rollers 41 and 42 (Specification 11:12-14).
- The jammed paper removing means has one of the cover plates 23 formed to be revolved with a hinge shaft 81 in the center. The jammed paper removing means further has an elastic member, such as a tension coil spring, located between cover plate 23 and base member 21 (Specification 12:14-17).
- The guiding means comprises guiding rollers 26 and 27 rotatably mounted at both sides of base member 21 (Specification 10:13-16).
- A front cover 22 is fixed to a front face of base member 21 (Specification 10:5-6). The front cover has a grasping groove 22a at a center portion

thereof to facilitate operation of receiving and withdrawing the multipurpose feeding unit assembly, by the grasping groove (Specification 10:17-11-1).

- Position guiding members 73 are fixed to a rear side of base member 21, and position guiding holes 74 are formed at an inner portion of main body 10. The position guiding members are respectively inserted thereinto (Specification 12:8-13).

When paper is jammed in feeding unit assembly 20, a user pulls assembly 20 in the direction of arrow E of Fig. 6 (Specification 15:4-12), which is resisted by the elastic member (e.g., tension coil spring) which stores mechanical energy when stretched. Grasping groove 22a in front cover 22 assists in the withdrawal operation. Then the user raises cover plate 23 upward. Cover plate 23 is then revolved with hinge shaft 81, which exposes to the outside a portion between feeding rollers 41 and 42 and pinch rollers 51 and 53 (Specification 15:8-12). That makes it easy for the user to remove the jammed paper (*id.*).

Then, the user pushes assembly 20 in the direction of arrow F of Fig. 6, returning the assembly into the apparatus (Specification 15:13-18). Guiding members 71 are entered into holes 74 (*id.*), and the stored mechanical energy of the elastic member is released as this occurs, which guides assembly 20 exactly into place and prevents it from

being arbitrarily moved forward incorrectly (Specification 16:1-2).

VI. ISSUES ON APPEAL

The ultimate issues in this appeal of the final rejection herein are:

A. Whether claims 2-3, 7, 9, 10, 13-15, and 18 were improperly rejected under § 103(a) over the combination of appellant's allegedly admitted prior art and Arai '828 (Paper No. 10, p. 5, § 4).

B. Whether claims 2-3, 7, 9, 10, 15, and 18 were improperly rejected under § 103(a) over the combination of Arai and Sasaki '616 (Paper No. 10, p. 6, § 5).

C. Whether claims 6 and 17 were improperly rejected under § 103(a) over the combination of appellant's allegedly admitted prior art and Arai, and further in view of Yim '307 (Paper No. 10, p. 8, § 6).

D. Whether claims 6 and 17 were improperly rejected under § 103(a) over the combination of Sasaki and Yim (*id.* § 7).

E. Whether Claims 8 and 19 were improperly rejected under § 103(a) over the combination of appellant's allegedly admitted prior art and Arai, and further in view of Mochimaru '299 (Paper No. 10, p. 9, § 8).

F. Whether Claims 8 and 19 were improperly rejected under § 103(a) over the combination of Sasaki, Arai, and Mochimaru (Paper No. 10, p. 10, § 9).

Applicant (hereinafter "Lim") believes that the appeal is better considered, how-

ever, in terms of the three principal legal issues underlying each of the ultimate § 103(a) issues:

1. Whether the § 103 rejections are each defective because the cited art lacks a claim element (limitation). This issue in turn involves in each case a misconstruction of the claim, based on the failure by the Examining Staff to obey the command of § 112 ¶ 6 and *Donaldson* to construe a means-plus-function claim as covering the structure that the specification describes for carrying out the recited function, and equivalents thereof.

2. Whether the § 103 rejections are defective for failure to make evidence-based findings establishing a teaching, suggestion, or motivation in the prior art to adapt and combine the devices of the cited references in order to arrive at Lim's invention.

3. Whether the § 103 rejections are defective for failure to make evidence-based findings on the level of ordinary skill in the art.

VII. GROUPING OF THE CLAIMS

The claims should be grouped as follows:

For issue 1 (§ 112 ¶ 6), the claims may appropriately be considered as a whole, since the fundamental issue of the proper application of § 112 ¶ 6 to means-plus-function language is the same for all claims. Apparatus claim 2 is considered representative of the

claims.²

For issue 2 (motivation to combine), the claims should in principle be grouped according to the particular different combinations of references that the Examining Staff relied upon for the different final rejections. This would lead to a grouping based on issues A to F, above. However, the defective language in the final rejections is in many instances the same, and therefore Lim argues against them by incorporating earlier argumentation by reference. An appropriate grouping of claims is therefore as follows:

A. Claims 2-3, 7, 9-10, 13-15, 18.

B. Claims 6, 8, 17, 19.

For issue 3 (skill level), Lim's argument that appropriate findings backed by substantial evidence were not made applies equally to all claims on appeal.

VIII. ARGUMENT

In the present posture of this case, the following claims have been allowed:

- apparatus claims 4 and 5 (originally dependent from independent apparatus claim 2), directed to an electro-photo multi-functional apparatus (e.g., a copying machine) having an improved "jammed paper removing means for easily removing a jammed sheet of paper";

² Although independent process claim 13 has slightly different means-plus-function language, the difference is not material to the legal issue.

- method claims 11 and 12 (originally dependent from independent method claim 9), directed to a method of facilitating removal of a paper jam in such a machine; and
- process claim 16 (originally dependent from independent process claim 13), directed to a process for manufacturing such a machine by providing recited elements thereof).³

The rejected claims, now on appeal, are the foregoing independent claims (claims 2, 9, and 13) and other claims dependent from them (claims 3, 6-10, 13-15, 17-19). The rejected claims do not contain an express recitation of the elements of the allowed claims, although they contain “means for” language that Lim hereinafter argues comprehends the recited elements of the allowed claims.

Because claims 4-5, 11-12, and 16 were allowed, it is clear that the specification describes patentable subject matter in the form of an apparatus, a method of using the apparatus, and a process for manufacturing the apparatus, all of which in some way involve a improved “jammed paper removing means” for removing a jammed sheet of paper from an image reproduction machine. The issues on appeal involve whether Lim properly claimed the patentable subject matter of his specification, as § 112 ¶ 6 authorizes, in the

³ The formerly dependent claims were allowed only when rewritten as independent claims (or claims dependent from such a rewritten claim) containing the limitations of the rejected base claim and any intervening claims.

rejected claims, and therefore whether the Examining Staff improperly rejected those claims; or whether the Examining Staff committed legal error in rejecting the claims by failing to support the rejections on the record in the manner required under governing Federal Circuit law.

**A. THE EXAMINING STAFF COMMITTED REVERSIBLE ERROR BY
REFUSING TO FOLLOW THE MANDATE OF *DONALDSON* THAT IT
CONSTRUE THE CLAIMS TO COVER THE STRUCTURE THAT THE
SPECIFICATION DESCRIBES AND EQUIVALENTS THEREOF**

Section 112, paragraph 6, expressly authorizes patent appellants to claim their inventions in means-plus-function format. The statute expressly provides that such claims shall be construed to cover the structures that the specification describes for carrying out the recited function, and equivalents thereof.

Each independent claim on appeal contains a "means for" element, i.e., "a jammed paper removing means for easily removing a jammed sheet of paper" in claims 2 and 9, and "a jammed paper removing means for improved removal of a jammed sheet of paper" in claim 13. There is no dispute over the fact that *none* of the cited references discloses a jammed paper removing means with the "elastic spring member...between the cover plate and the base member" of allowed claims 5, 12, and 16,⁴ or with a jammed paper removing means with the combination of two cover plates, powered feeding rollers, and pinch

⁴ The corresponding portion of the specification (Specification 12:15-16) describes the elastic member as follows: "an elastic member such as a tension coil spring is provided between cover plate 23 and base member 21."

rollers described in allowed claims 4 and 11. Nonetheless, the Examining Staff refused to consider either of those structural expedients to be imported into the independent claims on appeal by the "means for" language of the claims.⁵ The Examining Staff therefore improperly rejected the independent appealed claims and the appealed claims dependent from them.

Properly construed, the means-plus-function independent claims on appeal, and every claim dependent therefrom, incorporated as an element--a jammed paper removing means embodying the elastic spring member, or the cover and roller combination that the specification describes, or equivalents thereof.⁶ Since the cited references do not disclose

⁵ The office actions contain no explicit claim construction. However, in each response to the rejections, Lim protested that the cited references did not disclose all elements of his claims, because under § 112 ¶ 6 the structure described in the specification was incorporated into the means-plus-function claims. See Paper No. 8, pp. 32-33, ("In addition, Arai does not disclose Lim's 'jammed paper removing means for easily removing a jammed sheet of paper.' Arai discloses a means for jam removal, but it is not the means that Lim's specification describes. Yet Arai must disclose that to satisfy *[In re] Lowry, supra*. Claim 2 is clearly a means-plus-function claim that invokes § 112 ¶ 6 under the PTO Guidelines for means-plus-function claims. Therefore, claim 2 incorporates the corresponding structure from the specification, per *Chiuminatta*."), p. 34 ("Under *In re Donaldson Co.*, ..., the structural difference [between Arai and the claimed subject matter] overcomes the rejection."); Paper No. 11, p. 5, ¶ d ("Furthermore, even combining Sasaki and the preamble of claim 1 does not provide all of the elements of Lim's 'means.' Paper No. 10 misunderstands § 112 ¶ 6 and its case-law when it says (p. 12) that 'the features as applicant states is in the specification are not recited in the rejected claim(s).' The reason for that is said (*id.*) to be that 'limitations from the specification are not read into the claims.' That statement completely misunderstands *In re Donaldson ...* and *Chiuminatta ...*").

After each of Lim's protests the Examining Staff maintained the § 103 rejection. See, e.g., Paper No. 12, maintaining that "The prior art of record still reads on the claimed instant invention, and the arguments were not persuasive."

⁶ No finding of equivalency was ever made below, nor was the issue ever raised. Lim is aware of no evidence in the record that could support any such finding if it had been made.

any such structure, the rejection violates the all elements rule applicable to § 103 rejections. No claim limitation can be ignored in making a patentability analysis under § 102 or under § 103. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994)(“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”).⁷

1. It was error for the Examining Staff to defy Donaldson's command

In construing the claims, the Examining Staff refused to consider that the claims incorporated the structure that the specification described for removing paper jams. That refusal violates the command of § 112 ¶ 6 and of the Federal Circuit in *In re Donaldson Co.*, 16 F.3d 1189, 29 U.S.P.Q.2d 1845 (Fed. Cir. 1994)(*en banc*). In § 112 ¶ 6 Congress ordered that a means-plus-function claim “shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” In *Donaldson* the court considered a rejection where the PTO refused to “read into the claims” the structures described in the specification. The PTO said that to do so would violate the rule against reading into a claim features or limitations found in the specification. The *en banc* court unanimously reversed.

⁷ See also *Al-Site Corp. v. VSI Int'l*, 174 F.3d 1308, 1324, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999). In that case, the Federal Circuit held that a claim was not shown to be obvious from the Seaver patent. The reason was that “although the Seaver patent discloses some of the elements recited in the Magnivision patents’ claims, it does not disclose the display member, the cantilevered support, or the aperture for mounting the hanger tag on the cantilevered support,” and the art of record did not suggest adding those elements to Seaver.

It held that “the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.” 16 F.3d at 1195. The effect of *Donaldson* is that the Examining Staff must carefully read the specification and consider it before attempting to interpret a claim in rejecting a patent application as unpatentable over the prior art.

Here, Lim repeatedly protested that the Examining Staff was obliged to interpret the means-plus-function language of Lim's claims on the basis of the structures described in Lim's specification, and equivalents thereof. Nonetheless, the Examining Staff simply assumed that if the prior art devices performed the same function as the recited function of Lim's means-plus-function claims, that was enough to make the devices read on the claims. That defective approach has fatally tainted the rejections.

Any patentability analysis must begin with a proper claim construction. See *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1454, 46 USPQ2d 1169 (Fed. Cir. 1998) (en banc). Here, the Examining Staff did not even make any explicit claim construction, and it is clear that the claim construction implicit in the rejection is wrong under settled § 112 ¶ 6 law.⁸ A proper construction of the “means for” language of the independent

⁸ Paper No. 10 wholly misunderstood § 112 ¶ 6 and its case-law when it said (p. 12) that “the features as applicant states is in the specification are not recited in the rejected claim(s).” The reason the staff gave for that statement (*id.*) was that “limitations from the specification are not read into the claims.” That statement completely misunderstands *In re Donaldson Co.*, 16 F.3d 1189, 29 U.S.P.Q.2d 1845 (Fed. Cir. 1994)(en banc) and *Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 46 U.S.P.Q.2d 1752 (Fed. Cir. 1997).

claims would require using the specification as a glossary for construing the means. *Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 46 U.S.P.Q.2d 1752 (Fed. Cir. 1997).

That in turn would have requiring importing into the claim, by the force of § 112 ¶ 6,⁹ the structure of allowed claims 5, 12, and 16¹⁰ or allowed claims 4 and 11,¹¹ and equivalents thereof. Each of those structures separately and independently distinguishes Lim's invention over the art of record. They represent at least two different aspects of Lim's paper jam removal means that are not found in the prior art, since the two groups of allowed claims were found patentable below, independently of one another, over the cited art.

It was reversible error to defy the command of *Donaldson*, as the Examining Staff did here. That error led to § 103 rejections in violation of the all elements rule.

It is not necessary under § 112 ¶ 6 to recite *expressis verbis* in the claims the elements recited in the specification that correspond to the means. Those elements are injected into the claim by virtue of § 112 ¶ 6. *Donaldson*, 16 F.3d at 1195.

⁹ Thus in *Donaldson* the Federal Circuit stated: "Also contrary to suggestions by the Commissioner, our holding does not conflict with the general claim construction principle that limitations found only in the specification of a patent or patent application should not be imported or read into a claim. ... What we are dealing with in this case is the construction of a limitation already in the claim in the form of a means-plus-function clause and a statutory mandate on how that clause must be construed." 16 F.3d at 1195.

¹⁰ This is the elastic member structure.

¹¹ This is the structure with the combination of two cover plates, powered feeding rollers, and pinch rollers.

2. *The doctrine of claim differentiation is no obstacle*

The Examining Staff argued in the final rejection (Paper No. 10 at 14) that the doctrine of claim differentiation justified the staff in refusing to interpret the independent claims as incorporating any structure recited explicitly in a dependent claim. The staff said that the doctrine of claim differentiation “requires” an independent claim to be interpreted differently than a dependent claim, so that claims 2, 9, and 13 should be interpreted as broader than elastic spring member-reciting claims 5, 12, and 17 or the other allowable claims. That is an error of law.

The doctrine of claim differentiation does *not* “require” an independent claim to be interpreted differently than a dependent claim. The doctrine “requires” nothing. It is at most just a guide, not a rigid rule, even where it is appropriate to apply it. *Laitram v. Rexnord, Inc.*, 939 F.2d 1533, 1538, 19 U.S.P.Q.2d 1367, 1371 (Fed. Cir. 1991). The Federal Circuit has held that “the dependent claim tail cannot wag the independent claim dog.” *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 28 U.S.P.Q.2d 1333 (Fed. Cir. 1993). Thus, in *IMS Technology, Inc. v. Haas Automation, Inc.*, 206 F.3d 1442, 54 U.S.P.Q.2d 1129 (Fed. Cir. 2000), the Federal Circuit held that the doctrine of claim differentiation did not keep a means-plus-function claim from being valid along with a more specific dependent claim. For one thing, the court said, the judicially created doctrine of claim differentiation cannot override the statutory mandate of § 112 ¶ 6, even

if the claims have the same scope. An applicant is entitled as a matter of law to claim an invention under § 112 ¶ 6 and also claim the invention structurally. For another thing, the two claims are not of equal scope because the means-plus-function claim is broader. It expressly extends to equivalents of the structure of the dependent structural claim.¹²

In the instant case, those considerations set forth in *IMS Technology* apply with special force. First, Lim's dependent and independent claims do not have the same scope because the independent claims cover use of either of the two different structures ([i] elastic member and [ii] combination of covers and various kinds of rollers) of the allowable dependent claims.¹³ Second, the independent claims cover "equivalents thereof" in addition to the structures that the dependent claims expressly recite. Third, the claim-differentiation doctrine cannot override the statutory mandate of § 112 ¶ 6 that Lim is entitled to claim in means-plus-function format if he wants to do so. The doctrine of claim differentiation is therefore no bar to Lim's being entitled both to the allowed dependent claims and the rejected independent claims from which the former depend.

¹² The Federal Circuit stated: "The scope of [dependent] claim 3 is clearly narrower than that of [independent] claim 1 because claim 3 covers only a tape cassette transport, whereas claim 1 covers a tape cassette transport and its equivalents in accordance with § 112 ¶ 6."

¹³ This applies to independent apparatus claim 2 and allowed claims 4-5, and independent method claim 9 and allowed claims 11-12. In the case of independent process claim 13 and allowed claim 16, the more specific claim is directed only to the paper jam removal means with an elastic member. There is no more specific claim directed to the use of the cover and rollers combination. Hence, the only claim covering that is the independent process claim, which covers both expedients of claims 4-5. Thus the claim differentiation argument clearly does not even apply to claim 13 on the facts.

3. *Arai does not disclose an elastic member*

The final rejection (Paper No. 10, p. 14) asserted that Arai disclosed the elastic member of Lim's "jammed paper removing means for easily removing a jammed sheet of paper," because Arai's metal linkage 34 "reads on the elastic member" which Lim teaches as an element of that means. In response to Lim's objection that a metal linkage is *not* elastic, the Examining Staff asserted (*id.*) that a metal linkage has "some amount of elasticity" and therefore corresponds to Lim's structure.

There are several independent defects with the position of the Examining Staff, any one of which would by itself is sufficient to make the rejection bad.

First, under *Donaldson* and § 112 ¶ 6, the corresponding structure that the specification describes (and equivalents thereof) establishes the outer limit for the claim. The instant specification (p. 12, lines 15-16) describes the elastic member as follows: "an elastic member *such as* a tension coil spring is provided between cover plate 23 and base member 21." Even if a metal linkage were elastic, which it is *not*, it would not be "an elastic member *such as* a tension coil spring." The term "such as" means "like" or "*ejusdem generis* with." A linkage is not *like* a spring nor *ejusdem generis* with a spring.

A linkage simply transmits motion or force from one location to another. A spring stores and releases mechanical energy, which a metal linkage cannot do. In Lim's device, the elastic member such as a tension spring stores mechanical energy when the cover

plate 23 and base member 21 are moved relatively. Moreover, by the same token Lim's elastic member such as a tension spring respectively aids or resists such movement of elements 23 and 21, depending on their respective direction of motion, so that they can be guided exactly into place or proper registration with one another. This assists in carrying out the function described in the last sentence beginning at the bottom of p. 15 of Lim's specification: "Therefore, the position of the multipurpose feeding unit assembly 20 is exactly guided and prevented from being arbitrarily moved forward." A device such as Arai's linkage of rigid metal parts, that did not store mechanical energy, could not and would not perform this function.

The stated function of Arai's metal linkage is completely different. As explained in Arai col. 10, the function of the linkage is to lock and unlock the conveying guides, a completely different function from that of Lim's elastic member:

...[T]he linkage 34 pivots clockwise as viewed in FIGS. 9(a) and 9(b); thereby the two conveying guides 45, 50 are locked. To release the lock, the linkage 34 may be turned counter-clockwise as viewed in FIGS. 9(a) and 9(b), by grasping the grip portion 63, as previously described. Referring to FIG. 10, main frame 30 may be linked with a lower conveying guide 45 by means of a linkage 34a having the same structure as a linkage 34. With the upper conveying guide 50 and lower conveying guide 45 locked, the upper conveying guide 50 is further lifted so as to place the lower conveying guide 45 in a predetermined rotational position, thereby the lower conveying guide 45 and the main frame 30 are locked. Here, the lower conveying guide 45 is not allowed to turn further, and therefore it is difficult to open the intermediate tray 31 widely. In this embodiment, when a sheet jam occurs in the intermediate tray 31, the main frame 30 and the lower conveying guide 45 are both locked, enabling single-handed removal of jammed sheets.

It is thus contrary to *Donaldson* and § 112 ¶ 6 to conclude that the metal linkage of

Arai is the same as the elastic member of Lim's specification.

Second, the Examining Staff's assertion that a metal linkage has "some amount of elasticity" and therefore corresponds to Lim's structure is not supported by substantial evidence of record. It is a mere conjecture by the Examining Staff, or at best an unsupported assertion. But the Federal Circuit requires factual assertions on the basis of which a rejection is made to be supported by substantial evidence of record. *In re Zurko*, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001) ("With respect to core factual findings in a determination of patentability" PTO "must point to concrete evidence in the record" and "cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense"); accord, *In re Lee, supra*. It was therefore error to base the rejection of Lim's claim's on the staff's unsupported speculations.

**B. THE EXAMINING STAFF FAILED TO SUPPORT THE REJECTIONS
WITH EVIDENCE-BACKED FINDINGS OF A TEACHING, MOTIVATION,
OR SUGGESTION IN THE PRIOR ART TO COMBINE THE REFERENCES**

All rejections are § 103 rejections. Each rejection is based on a combination of references. No reference of record is even alleged to disclose all elements of any claim. Claims 2-3, 7, 9, 10, 13-15, and 18 are rejected (i) over the combination of appellant's allegedly admitted prior art and Arai '828 (Paper No. 10, p. 5, § 4), and also, except for claims 13-14, (ii) over the combination of Sasaki '616 and Arai (Paper No. 10, p. 6, § 5).

Claims 6 and 17 are rejected over the combination of appellant's allegedly admitted prior art and Arai, and further in combination with Yim '307 (Paper No. 10, p. 8, § 6). The same claims are also rejected over the combination of Sasaki and Yim (*id.* § 7). Claims 8 and 19 are rejected over the combination of appellant's allegedly admitted prior art and Arai '828, and further in combination with Mochimaru '299 (Paper No. 10, p. 9, § 8). The same claims are also rejected over the combination of Sasaki, Arai, and Mochimaru (Paper No. 10, p.10, § 9).

All of the appealed claims are, or depend from, one of independent claims 2, 9, or 13, which are rejected only on the basis of the combination of Sasaki and either Arai or allegedly admitted prior art. Accordingly, if those rejections fail so, too, do the rejections of all of the remaining claims (3, 6-10, 13-15, 17-19¹⁴), which depend from those independent claims. If the Board agrees with Lim that the rejections of the independent claims are defective, it will be unnecessary for the Board to consider Lim's additional arguments as to the various rejections of dependent claims.

1. Independent claims 2, 9, and 16

It may be assumed for purposes of this appeal that Arai and Sasaki (or the allegedly admitted prior art) teach photo copiers each of which has some of the elements of Lim's invention, and that together the two devices contain all of the elements of Lim's

¹⁴ Claims 4, 5, 11, 12, and 16 were allowed.

invention, except for the two structures discussed in the preceding section of the Argument. (Those are the structures of the allowed claims: the elastic member of the jam removal means and the cover and rollers combination of that means.) For purposes of the present portion of Lim's Argument, it may be assumed that the two missing structures are immaterial or are absent from Lim's invention. That does not matter, because the combination of the references is not supported by any proper findings of a teaching, motivation, or suggestion in the prior art to combine selected elements of the references and to make the necessary adaptations of their elements to combine them in a way that duplicates Lim's invention. Moreover, the record lacks substantial evidence to support any such findings, even if they had been made.

The only remote approximation of a finding of a teaching, motivation, or suggestion in the prior art to make the combination and adaptation of Sasaki and Arai is found in the final rejection, Paper No. 10 (pp. 7-8, last ¶ of § 5). There, this terse statement occurs:¹⁵ "one looks to Arai for an operator-accessible way that is noncumbersome...to maintain clearing of sheet jam...." That is the only statement in this entire record that even purports to be a showing of teaching, suggestion, or motivation to combine the refer-

¹⁵ The statement occurs in response to Lim's protest that the rejection is illegal under *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999), and other cases, because of no teaching or motivation or suggestion in the prior art to combine the references. Paper No. 8 at 28-29, 32.

ences.¹⁶ But that does not begin to constitute what the Federal Circuit requires to establish a *prima facie* case under § 103 and thus meet the PTO's burden to establish non-entitlement to a patent.

The office action does not explain why one would “look to” Arai, rather than look to any of hundreds of other references. The office action does not explain why one would select particular elements A, B, and C from Sasaki and combine them with elements D, E, and F from Arai. The rejection therefore does not pass muster under such Federal Circuit decisions as *In re Lee*, ___ F.3d ___, ___ U.S.P.Q.2d ___ (Fed. Cir. 2002), which insist on *specificity* in establishing motivation in the prior art.

Thus, the Federal Circuit began in *Lee* by observing that “the central question is whether there is reason to combine [the] references,” a question of fact drawing on the *Graham* factors,” citing *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). The *Lee* court then went on to add (citations omitted): “The factual inquiry whether to combine references must be thorough and searching. It must be based on objective evidence of record. This precedent has been rein-

¹⁶ This further statement is made in Paper No. 10 at p. 13: “Another reason [to combine Arai and Sasaki] is that one provides paper jam removing means in the image forming apparatus art in order to remove paper jams. This is a hoary concept.” Lim does not consider this alleged statement of suggestion or motivation in the prior art to combine the references to require a detailed response. It is nonsense or at best circular: “An artisan is motivated to combine the elements of references A and B to accomplish C in order to accomplish C.” Lim invites the Board to imagine what the *Lee* court would have said of this hoary concept as a supposed rationale for combining Sasaki and Arai.

forced in myriad decisions, and cannot be dispensed with.”

The *Lee* court then addressed the same defect--utter lack of *specificity*--that pervasively characterizes the instant rejection. It said:

The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”)

The court pointed to the unspecific and meager explanation that the PTO gave for combining the references and found that the rejection did not measure up to APA standards. What the Federal Circuit said of the *Lee* rejection applies with equal or greater force to the instant rejection of Lim's claims:

With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner's conclusory statements that “the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software” and that “another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial” do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to “[use] that which the inventor taught against its teacher.” *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.

Not only does this record lack the explanation and findings that *Lee* and prior decisions such as *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999),

require but the record lacks substantial evidence to support such findings even if they had been made. This record is a vast wasteland when it comes to motivation in the prior art to combine the references.

Yet, the command of the Federal Circuit in *Lee* and other precedents is that the decision of the PTO must be supported by substantial evidence that furnishes a basis for the findings. The *Lee* court said that it is “the obligation of the agency to make the necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions. See *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001).” And in *In re Gartside*, 203 F.3d 1305, 1314, 53 USPQ2d 1769, 1774 (Fed. Cir. 2000), the Federal Circuit held that a PTO decision “must be justified within the four corners of the record.” Then, in *In re Zurko*, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001), the Federal Circuit held: “With respect to core factual findings in a determination of patentability” PTO “must point to concrete evidence in the record” and it “cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense.” See also *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962): “The agency must make findings that support its decision, and those findings must be supported by substantial evidence.”

The lack of such a record in this case therefore mandates reversal of the rejection

of the independent claims under appeal based on the combination of the Sasaki and Arai references.

The only remote approximation of a finding of a teaching, motivation, or suggestion in the prior art to make the combination and adaptation of Arai and the allegedly admitted prior art is identical to that which was just discussed--"one looks to Arai" (Paper No. 10, p. 6, § 4, and repeated at p. 13). The identical discussion therefore applies to this rejection, and is incorporated herein by reference. In addition, Lim points out (as he did twice before), to preserve his record on this point, that he did not admit that the combination of elements that the Examining Staff calls the admitted prior art has existed in combination in a single reference. Lim admitted that the elements each existed (one or more at a time) in prior art devices, but he did not admit that they all existed in combination in any one prior art device,¹⁷ and no reference disclosing such a device has been

¹⁷ The Examining Staff sought to base this so-called admission on Lim's use of a Jepson format. But as Lim pointed out previously, use of a Jepson format does not constitute an admission that the elements of the preamble existed in combination where the appellant denies that as a fact.

The use of Jepson format implies that the preamble elements are old, but that occurs only in the absence of any challenge from the applicant. When the applicant denies intention to admit that the preamble elements are old, or that their combination is old, the matter must be determined from the surrounding facts. Thus, the fact that the cited art of record in a prosecution file does not show the elements in combination dispels the implication that the combination is old. *In re Ehrreich*, 590 F.2d 902, 200 U.S.P.Q. 504 (CCPA 1979). Thus, the better view is represented by decisions such as *Western Broadcasting Co., Ltd. v. Capitol Records, Inc.*, 218 USPQ 94 (N.D. Calif. 1981), which holds:

Even if the claims here are in the form of Jepson claims, that does not necessarily make the old elements in the preamble part of a claimed combination ... [an old combination]. ... Ultimately, this can only be determined from the "felt meaning" of the claim, as derived from the patent itself, the specifications, the drawings, and

made of record. Given all of the other reversible errors in the final rejections, however, Lim considers this one to be unnecessary to address in detail.

2. Dependent claims 3, 7, 10-15, 18

These dependent claims were rejected in the same portions of the final rejection (Paper No. 10, §§ 3-4) and on the same grounds as were independent claims 2, 9, and 16. Lim therefore incorporates herein by reference as to those claims his immediately preceding arguments regarding the independent claims.

3. Dependent claims 6, 8, 17, 19

Claims 6 and 17 were rejected over appellant's allegedly admitted prior art in view of Arai, and further in view of Yim '307 (Paper No. 10, p. 8, § 6). In addition, the same claims were also rejected over Sasaki and Arai and further in view of Yim (Paper No. 10, p. 8, § 7). Claims 8 and 19 were rejected over appellant's allegedly admitted prior art in view of Arai, and further in view of Mochimaru '299 (Paper No. 10, p. 9, § 8). In addition, the same claims were also rejected over Sasaki and Arai and further in view of Mochimaru (Paper No. 10, p. 10, § 9).

the file wrapper.

Here, it may be obvious to combine the elements of the Jepson preamble together, but that does not excuse the Examining Staff from providing a teaching, suggestion, or motivation in the prior art to combine each of the elements in question that are found in the claimed invention. Thus, if the preamble has elements A, B, and C, and the improvement is D, the Examining Staff cannot short-circuit the motivation establishment process by saying it is obvious to combine the obvious combination of ABC with D (two pieces). The staff must show motivation in the prior art to combine A, B, C, and D (four pieces). The motivation must be shown for the claim "as a whole" -- not just for bits and pieces of the whole claim.

The only possible approximations of any explanations of a teaching, suggestion, or motivation in the prior art for these combinations of references are as follows:

- For allegedly admitted prior art plus Arai plus Yim (Paper No. 10, § 6): "It would have been obvious...in order to further guide the feeding unit."
- For Sasaki plus Arai plus Yim (*id.* § 7): "It would have been obvious...in order to further guide the feeding unit."
- For allegedly admitted prior art plus Arai plus Mochimaru (*id.* § 8): "It would have been obvious...so that the apparatus can be easily positioned within the image forming apparatus without difficulty."
- For Sasaki plus Arai plus Mochimaru (*id.* § 9): "It would have been obvious...so that the apparatus can be easily positioned within the image forming apparatus without difficulty."

Each of these supposed rationales is unspecific, which is contrary to the command of *Lee*. In addition, each is merely a hindsight statement of what the invention does, which is explained in Lim's specification. None is a statement of why an artisan who was unaware of Lim's invention and unaware of Lim's specification would be motivated to make the particular combination of references in question. None of them rises to the level of a teaching, suggestion, or motivation found in the prior art to make the inventor's invention by combining the cited references.

As the Federal Circuit held in *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000), and *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998), and reiterated in the *Lee* case, *supra*, “a showing of a suggestion, teaching, or motivation to combine the prior art references is an essential component of an obviousness holding.” Without it, a § 103 rejection cannot stand. These rejections are therefore unsupportable.

**C. THE EXAMINING STAFF FAILED TO SUPPORT THE REJECTIONS
WITH EVIDENCE-BACKED FINDINGS AS TO ORDINARY LEVEL OF SKILL**

In *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999), the Federal Circuit overturned an obviousness rejection because of its failure to make the kind of obviousness legal analysis that the Supreme Court commanded in *Graham v. John Deere Co.*, 376 U.S. 1, 17-18 (1966). Such a legal analysis must begin, the Federal Circuit has consistently held, with making specific findings of fact regarding the level of ordinary skill in the art. Thus the *Dembiczak* decision held that an obviousness rejection must be reversed if, like the instant rejection, it fails to contain “specific findings of fact regarding the level of ordinary skill in the art.” 175 F.3d at 1000-01, 50 USPQ2d at 1618. In addition, the findings that the PTO makes on the ordinary level of skill must be supported by substantial evidence of record. *In re Kaplan*, 789 F.2d 1574, 1580, 229 USPQ 678, 683 (Fed. Cir. 1986) (“Even if obviousness of the variation is predicated on the level of

skill in the art, prior art evidence is needed to show what that level of skill was.”). See also *In re Mayne*, 104 F.3d 1339, 1341, 41 USPQ2d 1451, 1453 (Fed. Cir. 1997) (“The foundational facts for the prima facie case of obviousness are: ... (3) the level of ordinary skill in the art.”).

Thus, the rejection in this office action lacks findings and analysis that the Federal Circuit considers essential to support a rejection based on ordinary skill in the art. In addition, the rejection in this office action lacks substantial evidence of record to support such findings, even if they had been made. Where, as here, the record does not contain substantial evidence to support necessary findings, the PTO's action will not be sustained. *In re Zurko*, 258 F.3d 1379 (Fed. Cir. 2001), 1385-86 (“With respect to core factual findings in a determination of patentability” PTO “must point to concrete evidence in the record” and “cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense”).

The only *scintilla* in this record touching on ordinary level of skill is an afterthought, conclusory, and unsupported comment in Paper No. 10, ¶ 12, made in response to Lim's protests in Paper No. 9 about the lack of findings and evidence concerning skill level. The Examining Staff “noted”: “It is noted that the level of skill is high and individuals in this art typically have advanced degrees.”

That is not what the Federal Circuit requires. It is unspecific and unsupported by

substantial evidence. It is not stated what "typical advanced degrees" that "individuals in this art" have: Ph.D in Sociology? Ph.D in Astrophysics? M.S. in Biotechnology? Certificate in Cosmetology? It is not stated how many years of work experience in the pertinent art they have. It is not stated what work experience doing what. Designing toner cartridges? Removing paper jams? The record has no evidence at all, let alone substantial evidence. That is not acceptable to the Federal Circuit. See *Lee, Zurko, Gartside, Burlington, supra*.

IX. CONCLUSION

The rejections of each of the claims on appeal are unsupportable, on three separate and independent grounds. Each claim has been misconstrued, in violation of § 112 ¶ 6 and *Donaldson*, causing each § 103 rejection to violate the all elements rule. Each combination of references is unsupported by any finding, based on substantial evidence, of any teaching, suggestion, or motivation to combine the references in a manner duplicating Lim's invention. The record lacks findings, based on substantial evidence, of the ordinary level of skill in the art.

Accordingly, the rejections should be reversed and the claims should pass to issue.

Respectfully submitted,



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X. APPENDIX

Claims on Appeal (2-3, 6-10, 13-15, 17-19)

1 2 (amended twice). In an electro photo multi functional peripheral apparatus
2 comprising:

3 a main body having an optional auxiliary device located at a first side there-
4 of;

5 a feeding unit for feeding sheets of recording paper, located at a second side
6 of the main body;

7 a feeding unit assembly removably mounted at a central portion of the main
8 body, for transporting the sheets of recording paper which the feeding
9 unit feeds,

10 *the improvement comprising:*

11 a feeding unit assembly comprising a jammed paper removing means for
12 easily removing a jammed sheet of paper.

1 3 (amended twice). The apparatus of claim 2, wherein said jammed paper
2 removing means comprises:

3 a rectangular base member;

4 at least one cover plate mounted on an upper face of the base member;

5 paper feeding means for feeding the sheets of recording paper, said paper
6 feeding means mounted at the cover plate; and

7 a guiding means for guiding a backward and forward movement of the
8 feeding unit assembly.

1 6. The apparatus of claim 3, wherein the guiding means is a pair of guiding rollers
2 rotatably mounted at the base member.

1 7. The apparatus of claim 3, comprising a front cover fixed to a front face of the
2 base member, the front cover comprising a grasping groove at a central portion thereof to
3 facilitate receiving and withdrawing the feeding unit assembly.

1 8. The apparatus of claim 3, further comprising:

2 a plurality of position guiding members fixed to a rear side of the base
3 member; and

4 a corresponding plurality of position guiding holes formed at an inner

5 portion of the main body, into which the position guiding members are
6 respectively inserted.

1 9 (amended twice). A method of facilitating removal of a paper jam in an electro
2 photo multi functional peripheral apparatus comprising:

3 a main body having an optional auxiliary device located at a first side there-
4 of;

5 a feeding unit for feeding sheets of recording paper, located at a second side
6 of the main body;

7 a feeding unit assembly removably mounted at a central portion of the main
8 body, for transporting the sheets of recording paper which the feeding
9 unit feeds,

10 said method comprising the steps of:

11 (1) providing the apparatus with a jammed paper removing means for easily
12 removing a jammed sheet of paper;

13 (2) detecting a paper jam; and

14 (3) operating the jammed paper removing means in a manner such that the paper
15 jam is removed.

1 10. The method of claim 9, wherein said jammed paper removing means
2 comprises:

3 a rectangular base member;

4 at least one cover plate mounted on an upper face of the base member;

5 paper feeding means for feeding the sheets of recording paper, said paper
6 feeding means mounted at the base member and the cover plate; and

7 a guiding means for guiding a backward and forward movement of the
8 feeding unit assembly.

1 13 (amended twice). A process for manufacturing an electro photo multifunction
2 apparatus, said process comprising the steps of:

3 (1) providing a main body having an optional auxiliary device located at a first side
4 thereof;

5 (2) providing a feeding unit for feeding sheets of recording paper, located at a
6 second side of the main body; and

7 (3) providing a feeding unit assembly removably mounted at a central portion of
8 the main body, for transporting the sheets of recording paper from the feeding unit;

9 *the improvement in said process comprising:* providing said feeding unit assembly with a
10 jammed paper removing means for improved removal of a jammed sheet of paper.

1 14 (amended twice). The process of claim 13, wherein said jammed paper
2 removing means comprises:

3 a rectangular base member;
4 at least one cover plate mounted on an upper face of the base member;
5 paper feeding means for feeding the sheets of recording paper, said paper
6 feeding means mounted at the base member and the cover plate; and
7 a guiding means for guiding a backward and forward movement of the
8 feeding unit assembly.

1 15 (amended). The process of claim 14, wherein said paper feeding means
2 comprises:

3 a plurality of powered feeding rollers mounted on a rear side of the base
4 member; and
5 a plurality of pinch rollers rotatably mounted at the at least one cover plate,
6 located opposite the feeding rollers.

1 17 (amended). The process of claim 14, wherein the guiding means is a pair of
2 guiding rollers rotatably mounted at the base member.

1 18 (amended). The process of claim 14, wherein said jammed paper removing
2 means comprises a front cover fixed to a front face of the base member, the front cover
3 comprising a grasping groove at a central portion thereof to facilitate receiving and
4 withdrawing the feeding unit assembly.

1 19 (amended). The process of claim 14, wherein said jammed paper removing
2 means comprises:

3 a plurality of position guiding members fixed to a rear side of the base
4 member; and
5 a corresponding plurality of position guiding holes formed at an inner
6 portion of the main body, into which the position guiding members are
7 respectively inserted.